

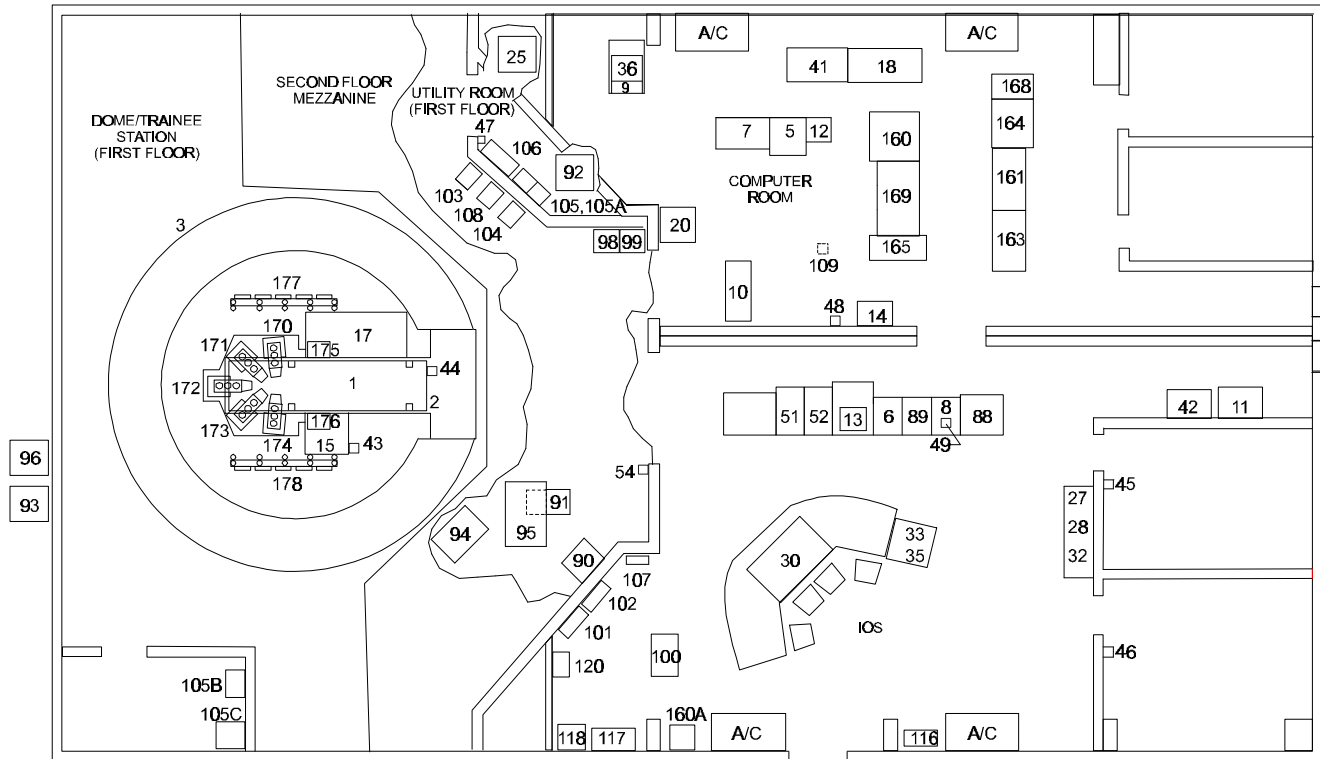
SUMMARY OF
F-14B/A WEAPON SYSTEM TRAINER

AUGUST 1999

DEVICE 2F169

NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION

ORLANDO, FLORIDA



TRAINING CATEGORY:

Aviation

ORIGINATING AGENCY:

CNO/AIR

SECURITY CLASSIFICATION OF DEVICE:

Device 2F169 is Secret.

PURPOSE OF DEVICE:

Provide flight operations training, weapon systems training and air combat maneuvering for the Pilot and Radar Intercept Officer (RIO) of F-14B aircraft.

INTENDED USE:

The WST is used to train and enhance the skills of the aircrew in all modes of F-14B aircraft operation from preflight to shutdown. These operations

include: takeoff and landing techniques from carrier and shorebase fields, normal and emergency flight operations, instrument flight procedures, all-weather operations, weapon systems/sensor operations, air combat maneuvering, air-to-air and air-to-ground weapons delivery.

FUNCTIONAL DESCRIPTION:

Device 2F169 includes: a trainee station that simulates the front and rear cockpits of an F-14B aircraft. The trainee station is contained in a 30 ft. diameter dome which is used to present the visual scene. The WST also includes an Instructor Operator Station (IOS) that controls and monitors all aspects of mission training, a computer room to house general purpose computers and support electronics, and a utility room for the hydraulic and pneumatic power units.

The IOS provides the capability to setup, initiate, and control the

training mission and to monitor and evaluate trainee performance. Instructors may select from a list of predefined mission scenarios, which may be modified if desired, or design a unique training mission to fulfill specific training requirements.

Training is provided through real-time interaction with simulated aircraft systems including: flight controls, cockpit instrumentation, avionics, and sensors. In addition to the baseline F-14B/F110 engine configuration, capability is provided via instructor selection at the IOS to fully simulate the performance and functional characteristics of the F-14A/TF30-P414A aircraft/engine configuration, including associated malfunctions. ATIS, GCA, and CCA simulation are also provided.

Computer image generation and visual systems provide dynamic visual scenes throughout a gaming area of 22,500 sq. nautical miles containing multiple high resolution flight corridors. Specific visual scenes are computer enhanced to provide realistic imagery to the trainees.

Realistic sensory cues are provided which include control stick loading, buffet, g-cueing, and aural cueing.

PHYSICAL INFORMATION:

Trainer Room - 41 feet high x 60 feet wide x 48 feet long.

Instructor Station Room - 11 feet high x 32 feet wide x 34 feet long.

Computer Room - 11 feet high x 26 feet wide x 34 feet long.

Utility Room - 12 feet high x 17 feet x wide x 15 feet long.

EQUIPMENT REQUIRED (NOT SUPPLIED):

None

OPERATIONAL EQUIPMENT:

Vertical Display Indicator Group (VDIG - VDI/HUD, VDIG Converter);
Programmable Multiple Display Indicator Group System(PMDIG, HSD, ECMD,);
AWG-9 System (PTID, DDD(IP1185/AWG-9), HCU(C9037/AWG-9), CAP, SCP);
FMC; FMC Power Supply/Storer;
ALR-67 Display Indicator(IP1276/ALR-67);
Memory Data Loader; RIO Lamp Dimmer Unit; Control Stick; Throttle Quadrant; KY-28 Control Panel; IFF Control Panel; Radio Control Panel (C-9946A/ARC-159)

POWER REQUIREMENTS:

480VAC, 3 PH, 4-Wire, 60 HZ, 185 KVA

INSTALLATION REQUIREMENTS:

Floor Loading - No special footing or foundation required.

Air Conditioning - Estimated: 250 KBTU/hr.

Environmental Characteristics - 70°F + 10°F, 50% ± 10% humidity.

PUBLICATIONS FURNISHED:

Instructor Utilization Handbook, F-14B/A WST, Device 2F169, NAWCTSD P-7331 (U)

Operation and Maintenance Manual, F-14B/A WST, Device 2F169, NAWCTSD P-7332 (U)

Off-Equipment Supplement Manuals, F-14B/A WST, Device 2F169, NAWCTSD P-7332 (U)

Planned Maintenance System, F-14B/A WST, Device 2F169, NAWCTSD P-7333 (U)

Commercial Data Package, F-14B/A WST, Device 2F169, NAWCTSD P-7334 (U)

Pocket Checklist, F-14B/A WST, Device 2F169, NAWCTSD P-7335 (U)

PERSONNEL:

Instructors: One F-14B/A Pilot and one F-14B/A RIO qualified as Device 2F169 Instructor/Operator.

Trainees: One F-14 pilot and one F-14 RIO.

Maintenance: Staffed with Contractor Operation and Maintenance Support (COMS) Personnel.

CONTRACT IDENTIFICATION:

Manufactured by NORTHROP GRUMMAN CORP, Electronic Sensors & Systems Sector, Defensive Systems, Holbrook, N.Y. under NAWCTSD Contract No. N61339-86-C-0164

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